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ABSTRACT

This booklet, designed for use with varying levels of remedial mathematics students in grades 6-10, is intended to help the student become more comfortable using the metric system, reinforce the metric ideas and notions that are taught in other courses, and aid in the development of basic mathematical skills by having the student participate in measuring activities. The unit consists of two basic parts: (1) map skills exercises for individualized work; and (2) the trip-planning project, which provides an opportunity for the mathematics teacher and the language arts teacher to correlate one or more lessons. (MP)

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road map math

(Metric Edition)

State Board of Education

Illinois Office of Education

Program Planning and Development

Revised September, 1976

SE 028 426

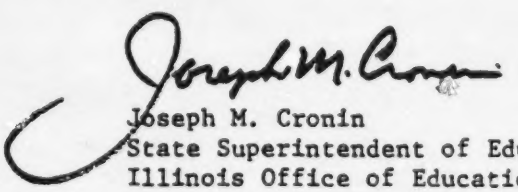
INTRODUCTION

With the impending conversion of the United States to the metric system, it seemed particularly appropriate at this time to print a revised edition of Road Map Math, using the metric system as the system of measurement. Educators feel that one of the best ways to become familiar with the metric system is to participate in measuring activities. Road Map Math (Metric edition) affords the student ample opportunity to do such. Every step has been taken to insure that this metric publication conforms to the accepted standards of the International System of Units (SI) and/or the National Bureau of Standards.

We hope that the use of this booklet will help the student become more comfortable using the metric system and reinforce the metric ideas and notions that are taught in other courses. In addition it should aid the student in the development of his basic mathematical skills.

The Illinois Office of Education is indebted to Mr. Harry K. Greenwood, Erie Junior High School, Erie, Illinois, and Mr. John G. Stoudt in this office for the preparation of the original version of Road Map Math. We are equally grateful to Mr. Wayne Bauer, District Mathematics Coordinator, Glencoe Public Schools, Glencoe, Illinois, for his contribution to the conversion of this workbook to a metric publication.

For additional copies of this publication, contact the Program Services Team member assigned to your district or write Program Planning and Development, Illinois Office of Education, 100 North First Street, Springfield, Illinois 62777.



Joseph M. Cronin
State Superintendent of Education
Illinois Office of Education

FOR THE TEACHER

This unit is designed for use with varying levels of remedial mathematics students in Grades 6-10. You may wish to use all or part of it. The unit consists of two basic parts:

1. Map Skills Exercises - pp 1-37
2. Trip Planning Project - pp 38-44.

The *Map Skills Exercises* provide opportunities for individual and/or small group work. These exercises are designed to make it possible for students in your classes to work at varying speeds and levels of difficulty.

The *Trip Planning Project* provides an opportunity for the mathematics teacher and the language arts teacher to correlate a lesson or two. The project should be an individual endeavor and should follow completion of the *Map Skills Exercises.*

You will need these materials:

1. Worksheets (use copy machine and duplicator)
* 2. Official Illinois road maps (one for each student)
* 3. State Park and Memorial brochures (from your area)
4. Booklets, pamphlets, and brochures from area museums, parks, educational institutions, private recreational areas, governmental buildings, etc.
5. 30 x 46 cm colored construction paper (for covers)
6. Colored pens or pencils.

* Send quantity orders on school stationery to:

Secretary of State
Shipping Department
Centennial Building, Basement
Springfield, Illinois 62706

**Send quantity orders on school stationery to:

Department of Conservation
Information Education Division
603 State Office Building
Springfield, Illinois 62706

NOTE: All students must use the Official Illinois Map since other road maps may be slightly different.

TIPS TO THE TEACHER

To aid in presenting this unit, a few tips are as follows:

1. As an introduction to this unit, some time might well be spent in discussion about "Which direction from here is north?" or "Point in the general direction of Centralia," to establish some orientation in direction. It may also be profitable to establish some orientation in distances. If a student should give an unreasonable response to the question "How far is Chicago from here?" you will know a little more about the pace you can set.

2. Other introductory questions might be "Who has lived elsewhere in the State?" or "Who has traveled to Centralia?"

3. There is more material in this unit than you may wish to use. Depending on the maturity and interest of your students, sustained work in this unit should not exceed 10 to 15 days.

4. Pass out individual worksheets to students daily, instead of a supply for several days.

5. Duplicate extra copies of all worksheets in case students make a number of errors.

6. Encourage students to decorate some of the auto pictures on the worksheets.

7. Worksheets should be corrected as soon as they are completed. It is often beneficial to allow students to correct their worksheets among themselves.

8. This unit is ideal for use by homebound students or students who are absent for a long period of time.

9. Some students may talk mom and dad into taking the one-day trip that they have planned. Encourage this.

10. It may be helpful to have many other Illinois maps available, such as wall maps, geological maps, desk maps, overhead projection maps, as well as a physical-political United States map.

11. An answer sheet is included, but recognize that considerable value may be derived simply by comparing answers among students. Recognize also that many answers given are approximate and may be challenged by your students.

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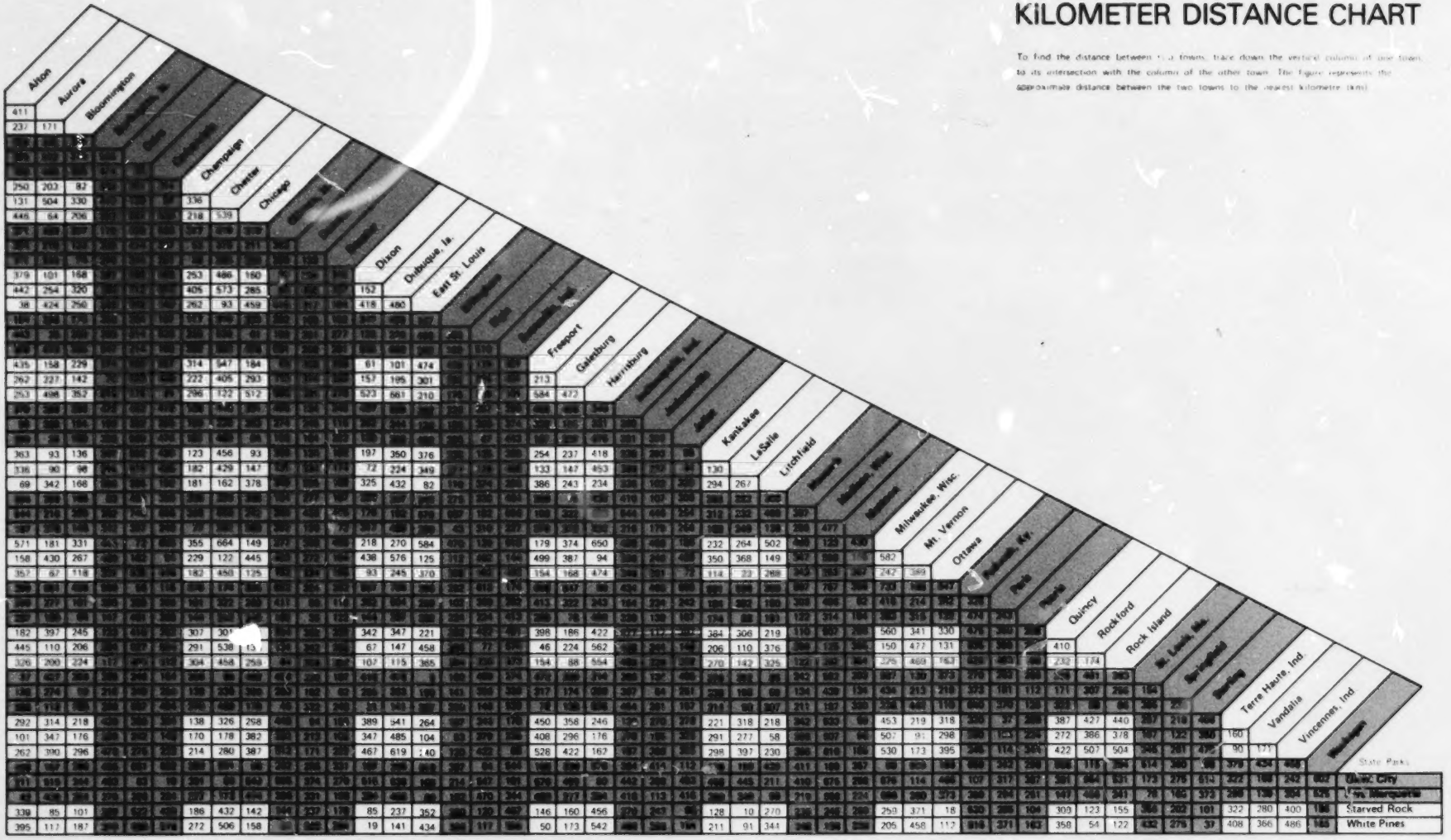
(Based on 1977-78 Road Maps)

KILOMETER DISTANCE CHART

To find the distance between two towns, trace down the vertical column of one town to its intersection with the column of the other town. The figure represents the approximate distance between the two towns to the nearest kilometre (km).



MAP SCALE

1 cm = 8 km
2.5 cm = 20 km
5.0 cm = 40 km

ILLINOIS FACTS

1. What is the approximate length of Illinois in kilometers measured through Rockford?_____

2. What is the approximate width of Illinois in kilometers at its widest point?_____

3. Name three of the largest lakes located entirely within Illinois._____

_____

4. How many counties are there in Illinois?_____

5. Name all states that border Illinois._____

_____

6. Measure the approximate length of the Illinois shoreline of the Mississippi River.

7. Find the total area in square kilometers (km^2) of your county. Length times width of a rectangle equals the area _____

8. List the towns and cities shown in your county.*

_____

_____

_____

* A detailed map of your county may be obtained for 25 cents from:

Division of Highways
Administration Building, Room
2300 South 31st Street
Springfield, Illinois 62706

USING A MAP LEGEND

Directions: Answer these questions using your map legend.

1. One centimeter on the map equals approximately _____ kilometers.

2. Forty kilometers on the map is represented by _____centimeters on the map.

3. A circle with a star enclosed represents _____.

4. "The Great River Road" follows the _____.

5. Using the legend, find and identify any five county seats in Illinois.

_____ _____ _____

_____ _____ _____

6. List the numbers of five interstate highways in Illinois.

_____ _____ _____ _____ _____

7. How many Illinois highway police stations can you count on the map? _____

8. Locate and identify five colleges or universities in Illinois. Tell the city in which each is located.

_____ _____

_____ _____

_____

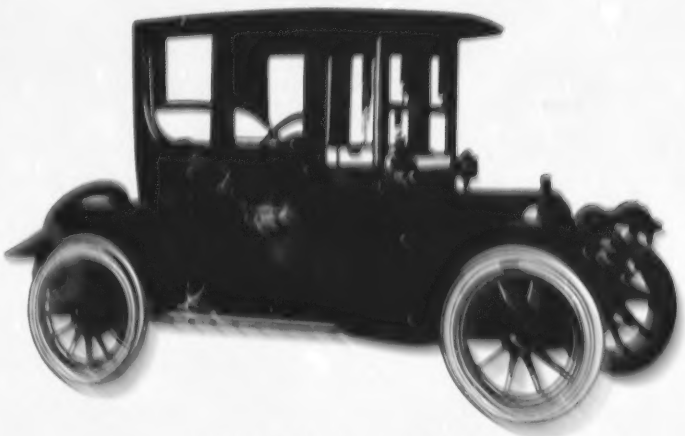
9. _____ symbol is used in the legend to locate towns and villages under 1000 inhabitants.

10. _____

STATE RECREATIONAL AREAS

Directions: *How many of Illinois' official recreation areas have the following?*

1. Camping _____
2. Cabins _____
3. Swimming _____
4. Hunting _____
5. Fishing _____
6. Boating _____



1910 White Opera Coupe

Directions: What State parks are located near the following towns or cities?

1. Sumner _____
2. LaSalle _____
3. Mt. Sterling _____
4. Annawan _____
5. Oakwood _____
6. Clinton _____
7. Oregon _____
8. Petersburg _____
9. _____
10. _____

USING THE POPULATION CHART

Directions: Look up the following cities or towns on the population chart, and write the population first in numbers and then in words.

A. Long View 270, two-hundred seventy

1. Geneseo _____

2. Pittsfield _____

3. East St. Louis _____

4. Sullivan _____

5. Paris _____

6. Rockford _____

7. Shawneetown _____

8. Jacksonville _____

9. LaSalle _____

10. Hebron _____

11. Evanston _____

12. St. Charles _____

13. Petersburg _____

14. Cairo _____

USING THE KILOMETER DISTANCE CHART

Directions: Use the kilometer distance chart to find the distance between these cities.

1. Alton and Aurora _____
2. Cairo and Chicago _____
3. Bloomington and St. Louis, Mo. _____
4. Carbondale and Galesburg _____
5. Rock Island and Joliet _____
6. Elgin and Champaign _____
7. Rockford and Mt. Vernon _____
8. Waukegan and East St. Louis _____
9. Peoria and Waukegan _____
10. East St. Louis and Peoria _____

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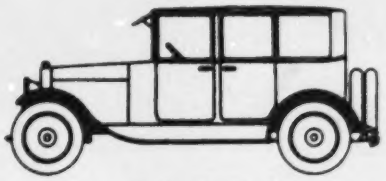
11. Danville and Ottawa _____
12. Chicago and Freeport _____
13. LaSalle and Paris _____
14. Indianapolis, Ind. and Peoria _____
15. Sterling and Quincy _____
16. Joliet and Galesburg _____
17. Vandalia and Rockford _____
18. Madison, Wis. and Paducah, Ky. _____
19. Dixon and Harrisburg _____
20. Mattoon and Jacksonville _____

13

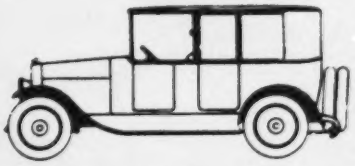
FINDING HIGHWAY JUNCTIONS

Directions: Use the index to locate these towns and cities. Then list the highways that form junctions in them.

Town or City	Junction
1. Forrest	47 and 24
2. Weldon	
3. Carrollton	
4. Ohio	
5. Albion	
6. Eureka	
7. Canton	
8. Tuscola	
*9. McHenry	
10. Streator	
11. Mason City	
*12. Lockport	
13. Sycamore	
14. Salem	
15. Roseville	
*16. Mundelein	
17. Rock Falls	
18. McLean	
*19. Chicago Heights	



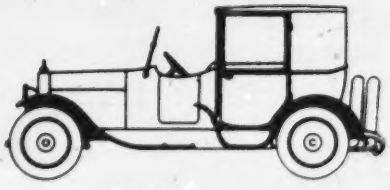
Sedan limousine



Limousine

Landaulet or cabriolet

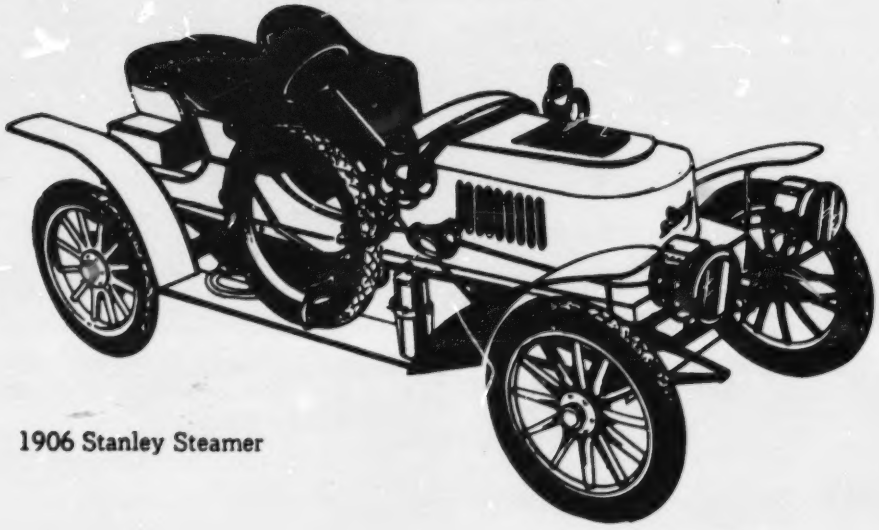
Brougham



The true brougham

*Use Chicago and Vicinity Map on back of Illinois road map.

ODOMETER READINGS



1906 Stanley Steamer

Directions: The first number listed below is your odometer reading from a given point in the United States; the second number is your odometer reading at the end of the trip. Find the number of kilometers traveled on each trip.

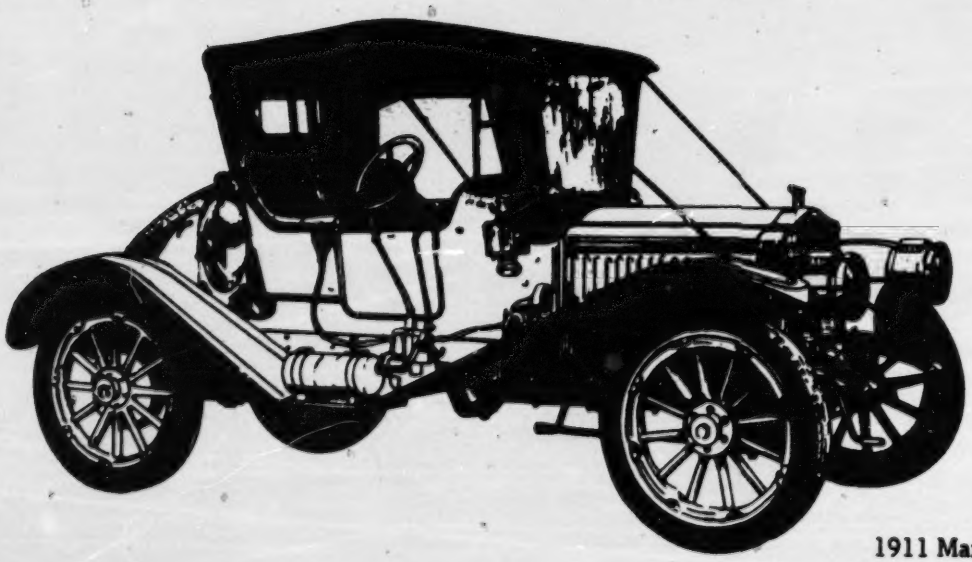
Beginning Location	Reading	End Location	Reading	Traveled
1. Cheyenne, Wy.	14 061.4	Little Rock, Ar.	15 116.7	_____
2. Houston, Tx.	7 877.7	Duluth, Mn.	9 496.5	_____
3. Cleveland, Oh.	74 210.9	Duluth, Mn.	75 055.2	_____
4. Fargo, N.D.	13 644.3	San Antonio, Tx.	15 032.1	_____
5. Los Angeles, Ca.	6 321.9	Indianapolis, In.	8 417.0	_____
6. Rockford, Il.	44 632.8	St. Joseph, Mo.	45 104.6	_____
7. Jacksonville, Fl.	51 006.7	Pierre, S.D.	52 780.1	_____
8. Knoxville, Tn.	64 335.5	Salt Lake City, Ut.	66 276.2	_____
9. Pittsburgh, Pa.	26 627.9	Davenport, Ia.	27 265.0	_____
10. Washington, D. C.	12 621.4	Milwaukee, Wi.	13 407.6	_____

POPULATION

Directions: Match the population of each town or city with one of the following groups (A through G):

A. 100,000 and over
B. 50,000 to 100,000
C. 25,000 to 50,000
D. 10,000 to 25,000
E. 5,000 to 10,000
F. 1,000 to 5,000
G. 1,000 and under

TOWN OR CITY	POPULATION
1. Cary	_____
2. Bridgeview	_____
3. Peoria	_____
4. Green Oaks	_____
5. Fairview Heights	_____
6. Wheaton	_____
7. Belleville	_____
8. East St. Louis	_____
9. Glencoe	_____
10. Cicero	_____

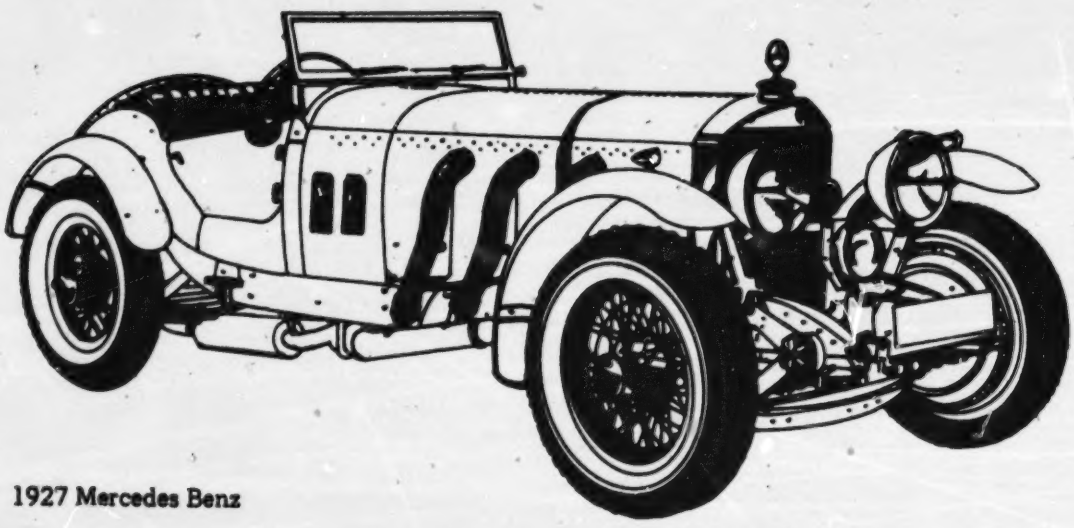


1911 Maxwell Runabout

WHICH IS SMALLER

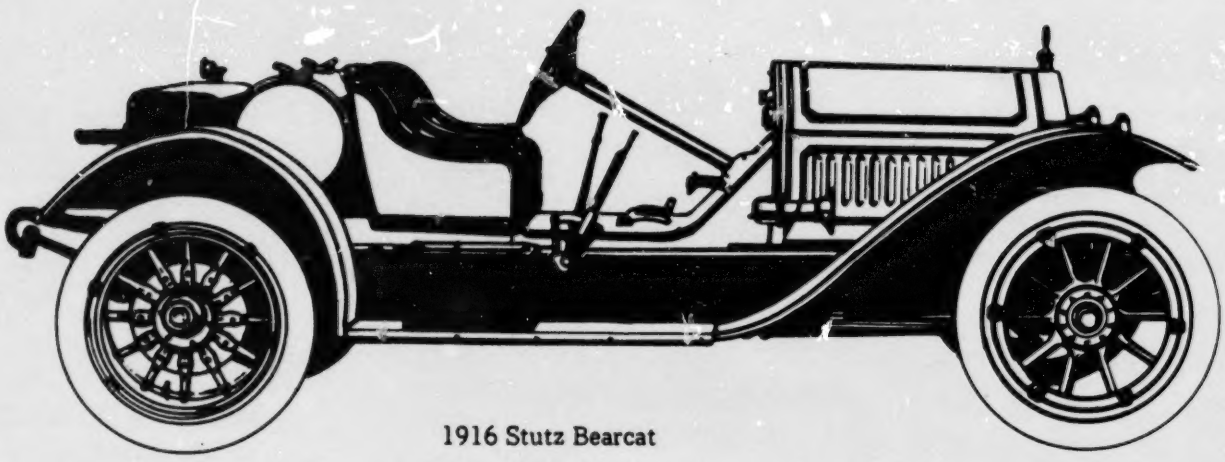
Directions: Use your map legend to determine which of these towns or cities is smaller in population. Circle the smaller, and write in populations to prove your answer.

1. Kenilworth or Jonesboro
2. Hillsboro or O'Fallon
3. Urbana or Moline
4. Wheaton or Downers Grove
5. LaGrange or Dixon
6. Nauvoo or Bunker Hill
7. Wilmette or Highland Park
8. Chicago Heights or Elgin
9. Homewood or Danville
10. Beardstown or Pontiac
11. Hoopeston or Spring Valley
12. Sterling or Marion
13. Galena or DuQuoin
14. Metropolis or Carthage
15. Waukegan or Joliet
16. Rochelle or Lincoln
17. Monmouth or Charleston
18. McLeansboro or Shelbyville
19. Collinsville or Pekin
20. Thompsonville or Xenia



1927 Mercedes Benz

WHICH TOWN IS LARGER?



1916 Stutz Bearcat

Directions: Use the map index to find which of the following is larger in population, and then circle the correct answer.

1. Beardstown or Dwight
2. Romeoville or Downers Grove
3. Mt. Morris or Carmi
4. Carbondale or Harvey
5. Peru or Morton
6. Newton or Aledo
7. Edwardsville or Kankakee
8. Belvidere or Effingham
9. Woodstock or Pontiac
10. Oak Park or Arlington Heights
11. Algonquin or Park Ridge
12. Mt. Carroll or Sparta
13. Hillsboro or Washington
14. Marengo or Harvard
15. East Moline or Cairo
16. Chicago or Ivesdale
17. Milford or New Milford
18. Shelbyville or Carlyle
19. Havana or Morris
20. Macomb or Charleston

CHOOSE THE CLOSEST NUMBER

Directions: Give the letter of the number which comes closest to the actual population of each of the following towns and cities.

A.	1500	E.	3500	I.	5500
B.	2000	F.	4000	J.	6000
C.	2500	G.	4500	K.	6500
D.	3000	H.	5000	L.	7000

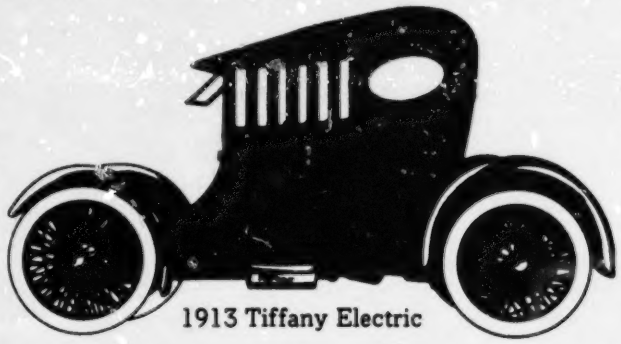
1903 Pierce Motorette

1. Winchester _____
2. Chillicothe _____
3. Pinckneyville _____
4. Roodhouse _____
5. Erie _____
6. Trenton _____
7. Hodgkins _____
8. Lincolnshire _____
9. Jonesboro _____
10. Sycamore _____
11. Buffalo Grove _____
12. Warrenville _____
13. Zeigler _____
14. Lacon _____
15. Monticello _____
16. Vandalia _____
17. Eldorado _____
18. Willow Springs _____
19. New Baden _____
20. Greenville _____
21. Wyoming _____
22. Fulton _____
23. McHenry _____
24. Cuba _____
25. Lake Zurich _____
26. Mt. Morris _____
27. Robinson _____
28. Crest Hill _____
29. Mt. Sterling _____
30. Palos Hills _____
31. Manteno _____
32. Clarendon Hills _____
33. Wauconda _____
34. Princeton _____
35. Stone Park _____
36. Morrison _____
37. Flossmoor _____
38. Litchfield _____
39. Sullivan _____
40. Gillespie _____

CHOOSE THE CLOSEST NUMBER

Directions: Give the letter of the number which comes closest to the actual population of each of the following towns and cities.

A.	450	E.	650	I.	850
B.	500	F.	700	J.	900
C.	550	G.	750	K.	950
D.	600	H.	800	L.	1000



1913 Tiffany Electric

1. Bath _____
2. Aviston _____
3. Okawville _____
4. Bedford Park _____
5. Plymouth _____
6. Hebron _____
7. Monee _____
8. Tallula _____
9. Franklin Park _____
10. Hammond _____
11. Westhaven _____
12. Odell _____
13. South Pekin _____
14. Paw Paw _____
15. Grand Tower _____
16. Ransom _____
17. Valier _____
18. St. David _____
19. Lenzberg _____
20. Wapella _____
21. Mendon _____
22. Cordova _____
23. Stanford _____
24. Philo _____
25. Golconda _____
26. Tamaroa _____
27. Hume _____
28. Athens _____
29. Buda _____
30. Yates City _____
31. Grand Ridge _____
32. Noble _____
33. Cobden _____
34. Viola _____
35. Williamsville _____
36. Potomac _____
37. Atkinson _____
38. Sheridan _____
39. Hennepin _____
40. Wayne City _____

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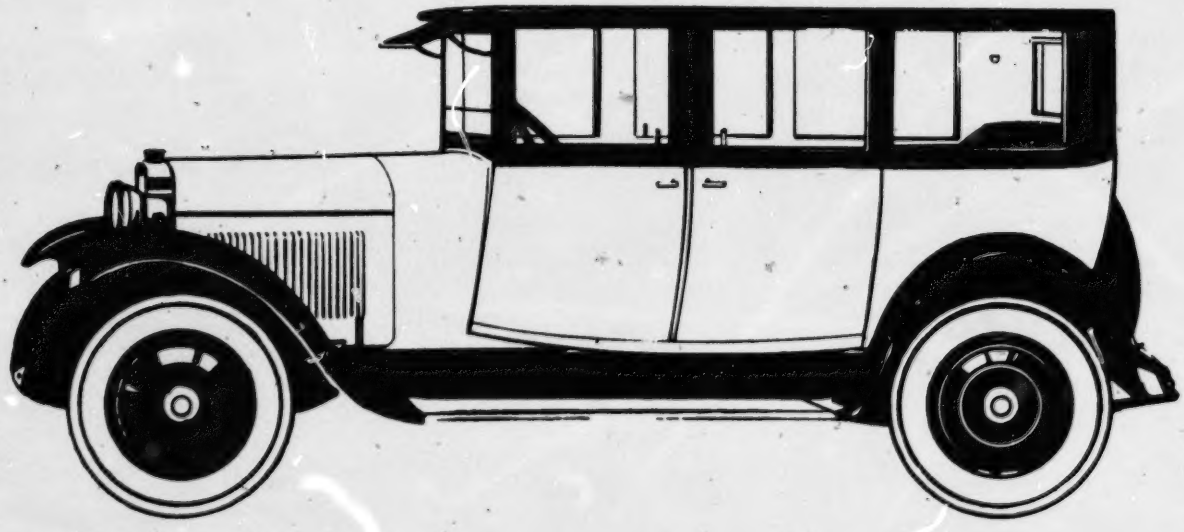
WHICH IS CLOSEST???

Directions: Give the letter of the number which comes closest to the actual population of each of the following towns and cities.

A.	10,000	E.	14,000	I.	20,000
B.	11,000	F.	15,000	J.	22,000
C.	12,000	G.	16,000	K.	25,000
D.	13,000	H.	18,000		

1. Deerfield _____
2. Crystal Lake _____
3. Charleston _____
4. Lincolnwood _____
5. LaGrange _____
6. Jacksonville _____
7. Oak Forest _____
8. Normal _____
9. Mt. Vernon _____
10. Macomb _____
11. Franklin Park _____
12. Addison _____
13. Des Plaines _____



1925 Dodge Sedan

HOW MUCH SMALLER ? ? ? ?

Directions: In the blank, tell how much smaller in population the first town is than the second.

1. Pearl City than Palmyra _____
2. Oak Brook than Oak Lawn _____
3. Skokie than Springfield _____
4. Prophetstown than Carthage _____
5. Peoria than Rockford _____
6. Oswego than Villa Park _____
7. West Frankfort than Urbana _____
8. Libertyville than Maywood _____
9. Princeton than Peoria Heights _____
10. Lake Forest than Northbrook _____
11. Eldorado than Decatur _____
12. Virginia than Roanoke _____
13. Prairie du Rocher than DePue _____
14. Red Bud than Blue Island _____
15. Lockport than Kewanee _____
16. Marseilles than Benton _____
17. Mulberry Grove than Cherry Valley _____

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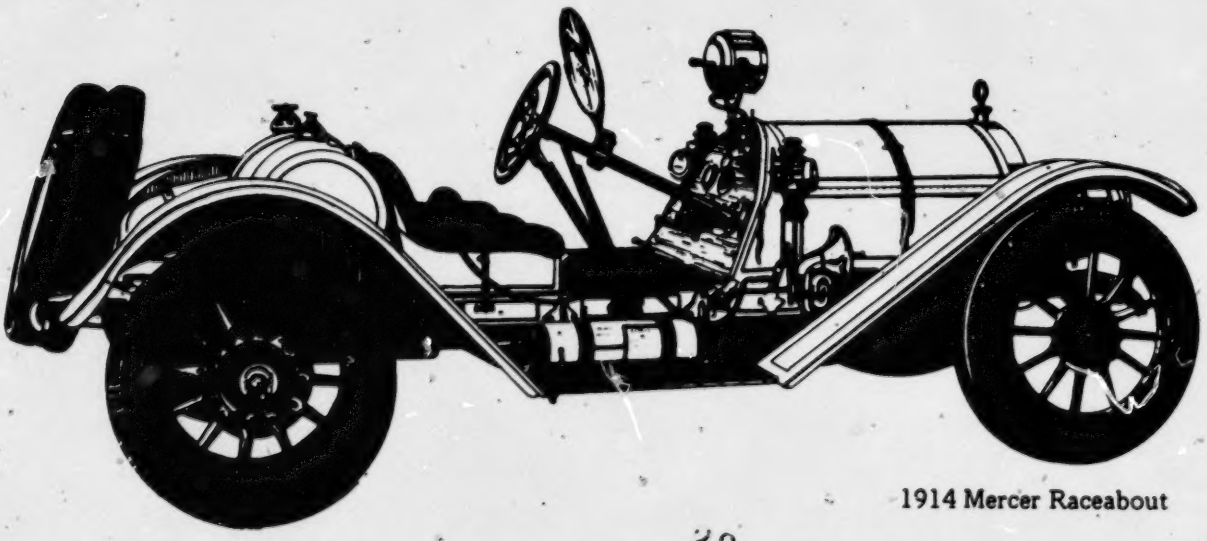
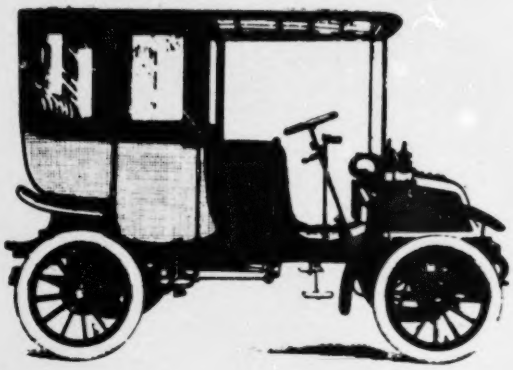


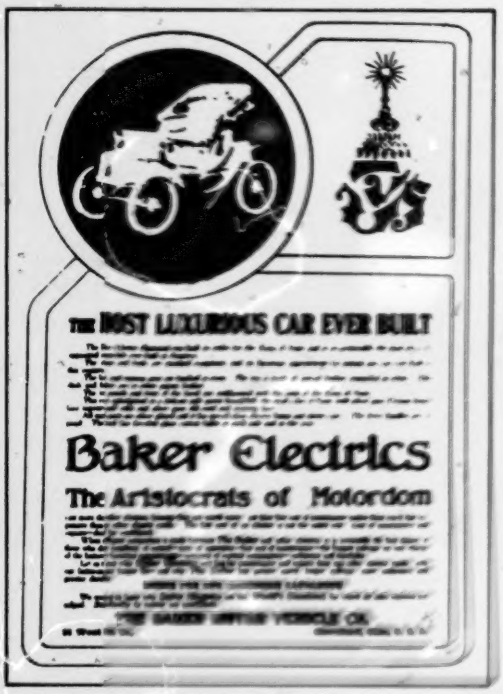
1914 Mercer Raceabout

HOW MUCH LARGER ? ? ?

Directions: Use your map index to determine how much larger in population the first town or city is than the second. Write your answer in the blank.

1. Moweaqua than Bunker Hill _____
2. Cerro Gordo than San Jose _____
3. Morris than Morrison _____
4. Tiskilwa than Neponset _____
5. Virginia than Vermont _____
6. Henry than Raymond _____
7. Peru than Lebanon _____
8. Watseka than Oquawka _____
9. Cherry Valley than Orangeville _____
10. Warsaw than Vienna _____
11. Sandwich than Coffeen _____
12. Nokomis than Pocahontas _____
13. Paris than Venice _____
14. Mt. Carmel than Walnut _____
15. Roxana than Elizabeth _____





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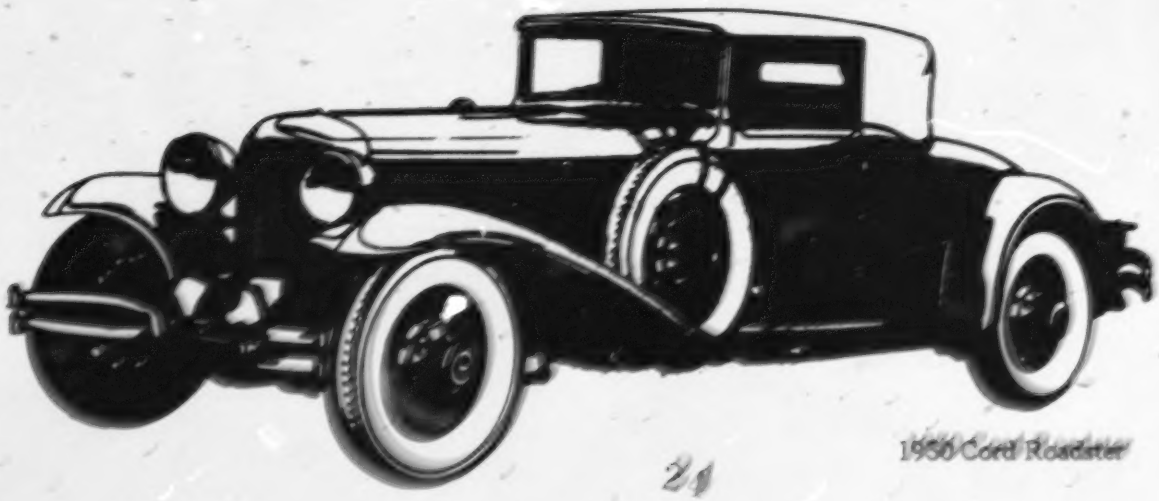
HOW MUCH LARGER??? HOW MUCH SMALLER???

Directions: Tell how many times larger or smaller one town or city is than another. Round final proportions to nearest whole number. (Example: Waynesville is about 3 times smaller than Warren)

1. Benton is about _____ times larger than Gardner.
2. Kenney is about _____ times smaller than Wyoming.
3. Park City is about _____ times larger than Tower Hill.
4. Teutopolis is about _____ times smaller than Sauk Village.
5. Bethalto is about _____ times larger than Chadwick.
6. Kankakee is about _____ times larger than Clarendon Hills.
7. Wapella is about _____ times smaller than Oglesby.
8. Rock Island is about _____ times larger than Edwardsville.
9. Roberts is about _____ times smaller than Aledo.
10. Brooklyn is about _____ times smaller than Buffalo Grove.
11. Crestwood is about _____ times larger than Marion.
12. Omaha is about _____ times smaller than Lexington.
13. Windsor is about _____ times smaller than LaGrange Park.
14. North Chicago is about _____ times larger than Northbrook.
15. Hodgkins is about _____ times smaller than Woodridge.
16. Hometown is about _____ times larger than Norwood.
17. Carlinville is about _____ times smaller than Westmont.
18. Moline is about _____ times larger than Oak Forest.
19. Waukegan is about _____ times larger than Hebron.
20. Broadview is about _____ times smaller than Bloomington.

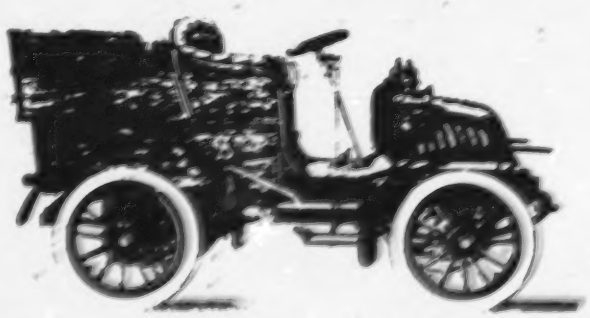


1930 Cord Roadster

ROUNDING POPULATIONS

Directions: Round the population of these cities and towns to the nearest tens.

1. Thayer _____
2. Tilton _____
3. Oswego _____
4. Kincaid _____
5. Raymond _____
6. Burnham _____
7. LaSalle _____
8. Cambridge _____
9. Lemont _____
10. Chebanse _____
11. Grandview _____
12. Tremont _____
13. Mt. Pulaski _____
14. Willow Hill _____
15. West Chicago _____
16. Polo _____
17. Ladd _____
18. Malvern _____
19. Shiloh _____
20. Benld _____
21. Gilman _____
22. Fulton _____
23. Rosemont _____
24. Lisle _____
25. Seneca _____
26. Riverton _____
27. Sheridan _____
28. Milford _____
29. Deer Creek _____
30. Coal City _____



ROUNDING POPULATIONS

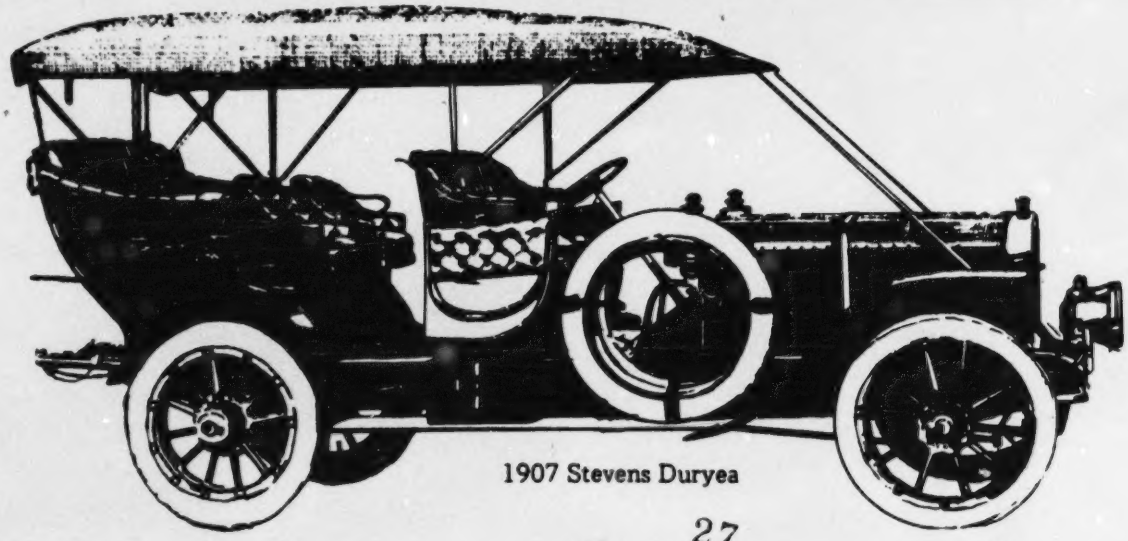
Directions: Round the population of these towns and cities to the nearest hundreds.

1. Hennepin _____
2. Toluca _____
3. Venice _____
4. Neponset _____
5. Virginia _____
6. North Quincy _____
7. Washburn _____
8. Crest Hill _____
9. DePue _____
10. Stickney _____
11. Winchester _____
12. Waterloo _____
13. Highwood _____
14. St. Anne _____
15. Galva _____
16. Shannon _____
17. Melrose Park _____
18. Barrington _____
19. Cisco _____
20. Irving _____
21. Beecher _____
22. Gladstone _____
23. Green Rock _____
24. Thornton _____
25. Orion _____
26. Knoxville _____
27. Johnson City _____
28. Lake Zurich _____
29. Bunker Hill _____
30. Springfield _____
31. Metropolis _____
32. Vienna _____
33. New Baden _____
34. Carrollton _____

ROUNDING POPULATIONS

Directions: Round the population of these cities and towns to the nearest thousands.

1. Colchester _____
2. Villa Park _____
3. Washington Park _____
4. Chicago Ridge _____
5. Lena _____
6. Albion _____
7. West Dundee _____
8. Cahokia _____
9. Barrington Hills _____
10. Taylorville _____
11. Downers Grove _____
12. Anna _____
13. Brookfield _____
14. Justice _____
15. Carterville _____
16. Tinley Park _____
17. Countryside _____
18. Vandalia _____
19. Streamwood _____
20. Washington _____
21. Centralia _____
22. Hickory Hills _____
23. Cherry Valley _____
24. Centerville _____



1907 Stevens Duryea

ARRANGING IN ORDER

Directions: Arrange the following cities and towns in order, according to their population. Arrange from the smallest to the largest.

GROUP 1

A.	Quincy	1.	_____
B.	Moline	2.	_____
C.	Bloomington	3.	_____
D.	Edwardsville	4.	_____
E.	Kankakee	5.	_____
F.	O'Fallon	6.	_____

GROUP 2

A.	Urbana	1.	_____
B.	DeKalb	2.	_____
C.	Charleston	3.	_____
D.	Macomb	4.	_____
E.	Carbondale	5.	_____
F.	Normal	6.	_____

GROUP 3

A.	Steger	1.	_____
B.	Batavia	2.	_____
C.	Marengo	3.	_____
D.	Grayslake	4.	_____
E.	Wheeling	5.	_____
F.	Crystal Lake	6.	_____
G.	Glenview	7.	_____
H.	Crete	8.	_____
I.	Valley View	9.	_____
J.	Glencoe	10.	_____

GROUP 4

A.	Cairo	1.	_____
B.	Hoopeston	2.	_____
C.	Lewistown	3.	_____
D.	Nauvoo	4.	_____
E.	Geneva	5.	_____
F.	Galena	6.	_____
G.	Lawrenceville	7.	_____
H.	Fulton	8.	_____
I.	Mascoutah	9.	_____
J.	Stockton	10.	_____

ARRANGING IN ORDER

Directions: Arrange the following cities and towns in order according to their population. Arrange from largest to smallest.

Red Group

A.	Marion	1.	_____
B.	Pontiac	2.	_____
C.	Carlinville	3.	_____
D.	Knoxville	4.	_____
E.	Norris City	5.	_____
F.	Cahokia	6.	_____

Green Group

A.	East St. Louis	1.	_____
B.	Decatur	2.	_____
C.	Joliet	3.	_____
D.	Aurora	4.	_____
E.	Springfield	5.	_____
F.	Elgin	6.	_____

Blue Group

A.	Casey	1.	_____
B.	Murphysboro	2.	_____
C.	Greenville	3.	_____
D.	Loves Park	4.	_____
E.	Geneseo	5.	_____
F.	Carrier Mills	6.	_____
G.	Petersburg	7.	_____
H.	Rantoul	8.	_____
I.	Wood River	9.	_____

Gold Group

A.	North Chicago	1.	_____
B.	Berwyn	2.	_____
C.	Franklin Park	3.	_____
D.	Brookfield	4.	_____
E.	LaGrange Park	5.	_____
F.	Palos Hills	6.	_____

FINDING AVERAGE POPULATIONS

Directions: Find the average population of each group of towns and cities, and write the average in the blank. Round final answers to the nearest whole number.

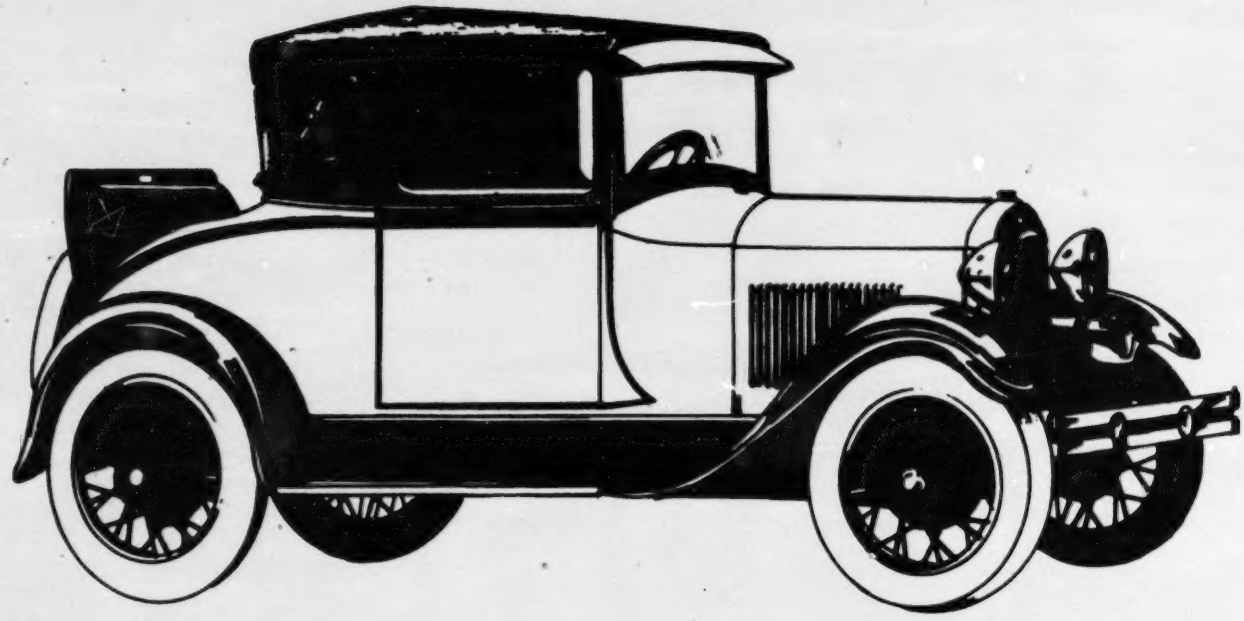
_____ 1. Alexis
Earlville
Little York

_____ 2. Ashland
Enfield
Marengo
Royalton
St. David

_____ 3. Salem
Maywood
Forest Park
Beardstown
Schaumburg

_____ 4. Shelbyville
Monmouth
Gillespie
Bradley
Cairo
Harrisburg
Murphysboro
Summit

_____ 5. Zeigler
Richmond
Lincolnshire
Dupo
Coulterville
Island Lake
Pinckneyville
Westville



1928 Model A Ford

30

WHICH ROUTE IS THE SHORTEST???

Problem 1: If you want to travel from Carthage to Galesburg, which of these routes would be the shortest? (Circle the correct letter, and then write distance for each one to prove your answer.)

_____ km A. East from Carthage on 136 to Macomb. North to 67 to Monmouth. Then east on 34 to Galesburg.

_____ km B. North from Carthage on 94 to 34. Then east on 34 through Monmouth to Galesburg.

_____ km C. East from Carthage on 136 to 41. Then north on 41 to Galesburg.

Problem 2: If you want to travel from Freeport to DeKalb, which of these routes would be the shortest? (Circle the correct letter, and write distance for each route to prove your answer.)

_____ km A. East from Freeport on 20 to 51. South on 51 to Alternate 30. Then east on Alternate 30 to DeKalb.

_____ km B. South from Freeport on 26 to 64. East on 64 to 51. South on 51 to Alternate 30. Then east on Alternate 30 to DeKalb.

_____ km C. South from Freeport on 26 to 72. East on 72 to Genoa. Then south on 23 to DeKalb.

Problem 3: If you want to travel from Clinton to Hoopeston, which of these routes would be the shortest? (Circle the correct letter, and write distance for each route to prove your answer.)

_____ km A. North from Clinton on 51 to Bloomington. Then east on 9 to Hoopeston.

_____ km B. Northeast from Clinton on 54 to Gibson City. Then east on 9 to Hoopeston.

_____ km C. East from Clinton on 10 to Urbana. East from Urbana on 74 to 49. North on 49 to 9. Then east on 9 to Hoopeston.

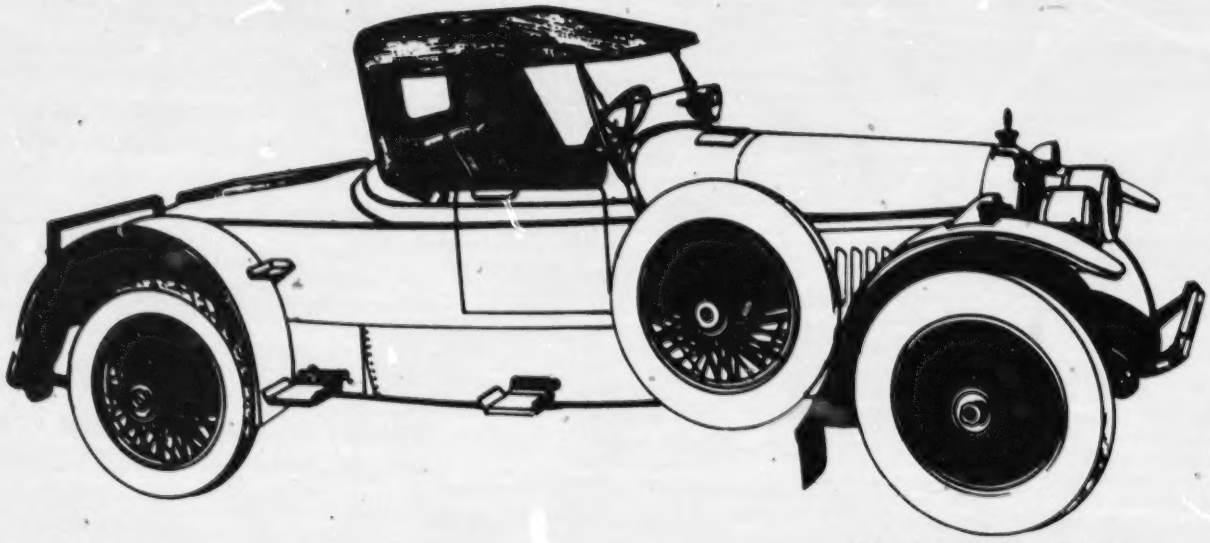
MORE - WHICH ROUTE IS THE SHORTEST???

Problem 1: Determine which route below is the shortest between DuQuoin and Olney. (Circle the shortest route, and record the distance for each route to prove your answer.)

_____ km A. North from DuQuoin on 51 to 15. East on 15 to Albion. Then north on 130 to Olney.

_____ km B. South from DuQuoin on 51 to 14. East on 14 to McLeansboro. East on 460 to Carmi. Then northeast on 1 to 130. North on 130 to Olney.

_____ km C. South from DuQuoin on 51 to 14. East on 14 to 57. North on 57 to 50. Then east on 50 to Olney.



1923 Cunningham Roadster

Problem 2: Determine which route below is the shortest between Princeton and Pontiac. (Circle the shortest route, and record the distance for each route to prove your answer.)

_____ km A. South from Princeton on 26 to 29. Southeast on 29 to 71. East on 71 to 51. South on 51 to 116. Then east on 116 to Pontiac.

_____ km B. North from Princeton on 26 to 80. East on 80 to Ottawa. Then south on 23 to Pontiac.

_____ km C. South from Princeton on 26 to 29. South on 29 to 17. East on 17 to 51. South on 51 to 116. Then east on 116 to Pontiac.

DISTANCE AND TIME

Directions: Using the kilometer distance chart, find the distance between these cities:

1. From Cairo to Champaign it is _____ km .
2. From Sterling to LaSalle it is _____ km .
3. From Freeport to Ottawa it is _____ km .
4. From Vandalia to Chicago it is _____ km .
5. From Mattoon to Galesburg it is _____ km .
6. From Waukegan to Bloomington it is _____ km .
7. From Paris to Elgin it is _____ km .
8. From Dixon to Litchfield it is _____ km .

A lady's rubber raincoat (1905)

Directions: Compute the time needed to drive between these cities at an average rate of 80 kilometers per hour. (Use the kilometer distance chart.)

	KILOMETERS	Time in Hours - Minutes
1. Carbondale to Champaign	_____	_____
2. Danville to Effingham	_____	_____
3. Jacksonville to Macomb	_____	_____
4. Quincy to Rockford	_____	_____
5. Springfield to Joliet	_____	_____

(Note to teacher) This exercise must be done in miles due to the fact that the Illinois map distances are stated in miles.

COMPUTING MILEAGE

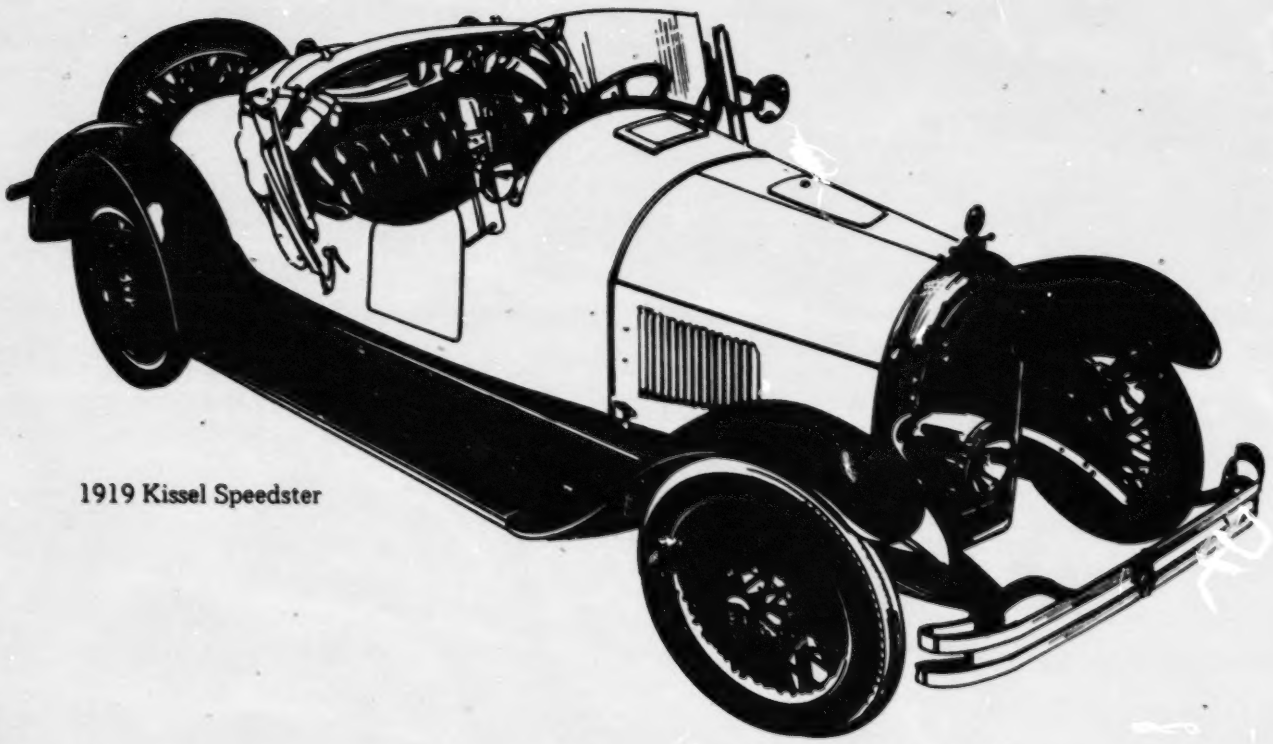
Directions: Given below are the names of two towns, and following is the highway route we are to use to get from one town to another. Using this information, add all the numbers between the stars on the map to arrive at the correct mileage.

	Towns	Highway	Distance
1.	Flora and Olney	50	_____
2.	Monmouth and Macomb	67	_____
3.	Centralia and Pana	51	_____
4.	Centralia and Clinton	51	_____
5.	Mendota and DeKalb	51, Alternate 30	_____
6.	Danville and Tuscola	1, 36	_____
7.	Belleville and Chester	149, 3	_____
8.	Quincy and Havana	24, 136	_____
9.	Freeport and Mendota	26, 52	_____
10.	Lincoln and Decatur	10, 51	_____
11.	Gibson City and Park Forest	47, 17, 54	_____
12.	Kewanee and Dixon	34, 26	_____
13.	Hamilton and Galesburg	136, 67, 34	_____
14.	Charleston and Mt. Carmel	130, 50, 1	_____
15.	Rockford and Springfield	51, 66	_____

FINDING MAP COORDINATES

Directions: Name the largest town or city located near each of these map coordinates.

Coordinate	City or Town	Coordinate	City or Town
1. K-9	_____	7. C-6	_____
2. M-6	_____	8. N-8	_____
3. E-4	_____	9. B-5	_____
4. H-1	_____	10. E-9	_____
5. D-9	_____	11. H-7	_____
6. L-7	_____	12. N-7	_____



1919 Kissel Speedster

OUR CAPITOL

1. What town or city appears to be in the geographic CENTER of Illinois?

   _____ (Use your ruler)

2. How many kilometers is it from Wisconsin? _____ From Indiana? _____

   From Missouri? _____ From Iowa? _____

3. Why is it important that Springfield has a central location in our State?

   _____

   _____

   _____

4. List as many highways that enter Springfield as you can.

   _____ _____

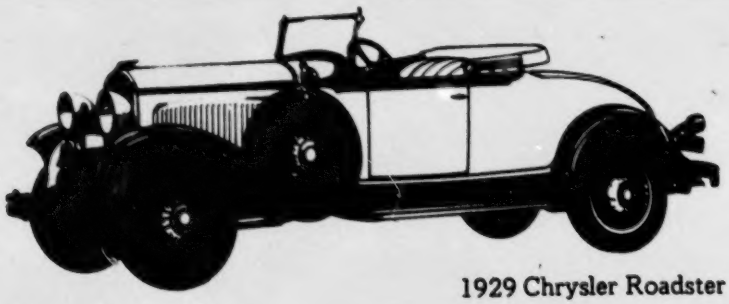
   _____

5. Is Springfield well located for industry and manufacturing? _____

   Tell why or why not. _____

   _____

   _____



1929 Chrysler Roadster

GEOGRAPHIC SECTIONS OF ILLINOIS

Directions: Locate each of these towns or cities according to their location in the various geographic sections of Illinois.

Geographic Sections
Northwestern
Northeastern
Central
West Central
East Central
Southern

	Town or City	Section
1.	Jonesboro	_____
2.	Augusta	_____
3.	Catlin	_____
4.	Harvard	_____
5.	Elizabeth	_____
6.	Johnston City	_____
7.	Eldorado	_____
8.	Mt. Pulaski	_____
9.	Tolono	_____
10.	Morrison	_____
11.	Geneva	_____
12.	Delavan	_____

COST PER KILOMETER

Directions: Given below is the kilometer distance various salesmen turned in to their company for automobile travel on the job. If the company allows them nine (9) cents per kilometer, what payment will each of these men receive?

	Salesmen	Distance	Amount of payment
1.	E. Schmidt	872	$
2.	F. Moore	1148	$
3.	L. Costa	1397	$
4.	M. Wentworth	822	$
5.	L. Gill	1116	$
6.	L. Hilton	1112	$
7.	L. Gaston	1102	$
8.	L. Mackay	1152	$
9.	P. Riley	1211	$
10.	J. Riley	1207	$

SALESMEN AND THEIR EXPENSES

Directions: If these salesmen are allowed a $15.00 lodging allowance per night and $10.00 per day for meals and other expenses, how much will each receive in expenses if he/she is on the road for the indicated travel? Add to this figure distance payments from the previous page.

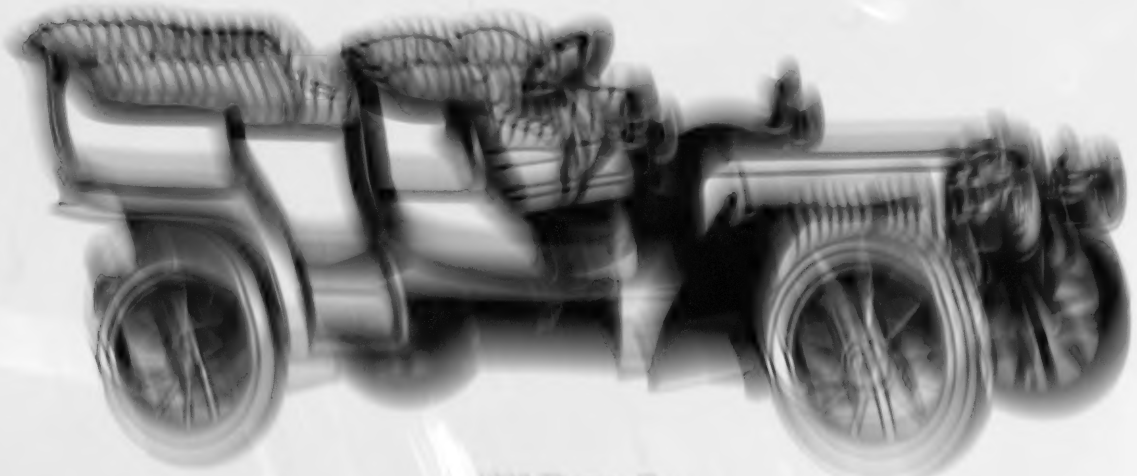
Salesman	Days and Nights of Travel	Total Amount Received
1. E. Schmidt	3	$
2. P. Moens	1	$
3. L. Goetz	1	$
4. M. Wentworth	10	$
5. L. Gill	1	$
6. [illegible]	1	$
7. [illegible]	1	$
8. [illegible]	1	$
9. [illegible]	1	$
10. [illegible]	1	$

2.0 cm = 40 km
1.5 cm = 30 km
1 cm = 20 km

USING THE CHICAGO SUPPLEMENT MAP

Directions: Using the kilometer SCALE, on the Chicago Supplement Map, find the approximate distance from:

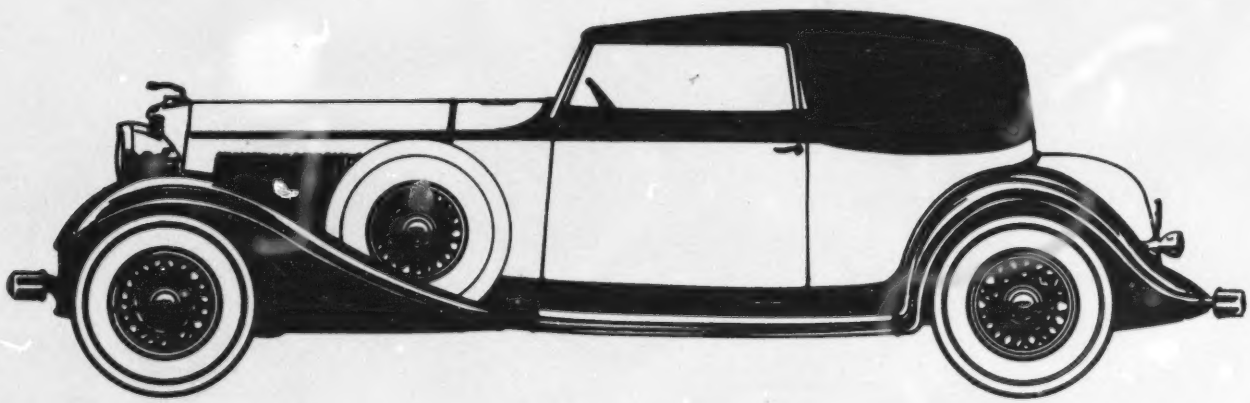
1. Wheaton to Oak Park via Roosevelt Road. _____
2. O'Hare Airport to Grant Park in Chicago via the Kennedy Expressway. _____
3. Skokie to Oak Lawn via Cicero Avenue. _____
4. Wisconsin State line to Indiana State line via Tri State Tollway (I94, 294) _____
5. St. Charles to Melrose Park via Route 64 _____
6. Aurora to Morton Grove via Route 31 and Edens Expressway _____
7. Evanston Park to Lincolnwood via Kedzie Avenue _____
8. Chicago Midway Airport to Lake Michigan via 63rd Street _____
9. Elgin to Grant Park in Chicago via Northwest Tollway and Kennedy Expressway _____
10. _____ _____



USING THE CHICAGO SUPPLEMENT MAP

Directions: Tell which expressway or tollway runs through each of these cities or towns. Use the Chicago Supplement Map. Use the *name* or number of the road.

1. Maywood _____
2. Alsip _____
3. Blue Island _____
4. Oak Park _____
5. Schiller Park _____
6. Lisle _____
7. Lansing _____
8. Dolton _____
9. Northfield _____
10. Argonne National Laboratory _____



1934 Lincoln Convertible

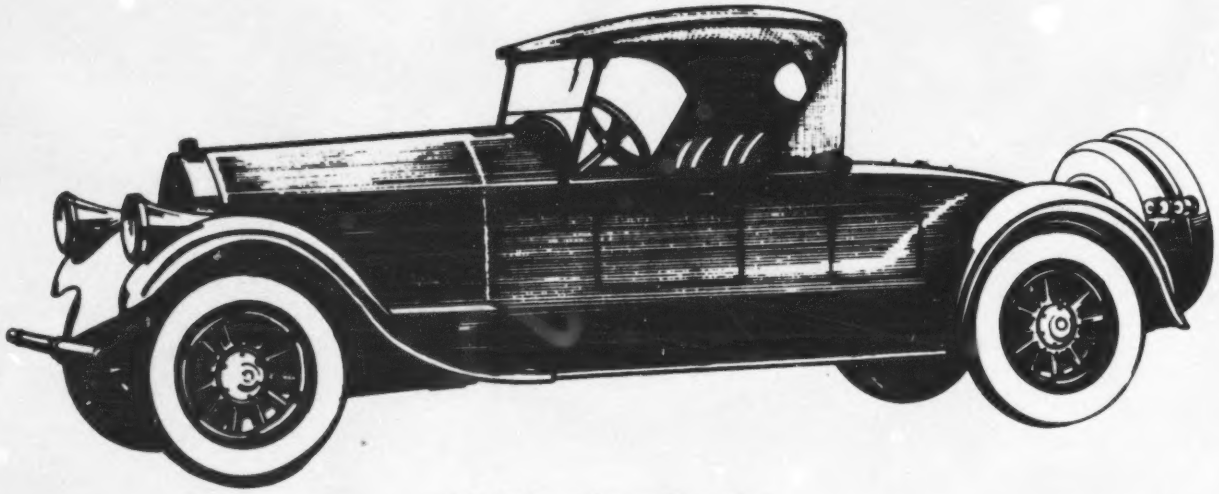
CHALLENGE PAGE ! !

Directions: Tell what these pairs of cities have in common. (Check the map legend.)

1. Beardstown and Marseilles
2. Shelbyville and Carlyle
3. Savanna and Quincy
4. Rockford and Cairo
5. Waukegan and Evanston
6. Charleston and Macomb
7. LaSalle and Joliet
8. Newton and Yorkville
9. Petersburg and Marshall
10. Kaskaskia and Vandalia

1893 Duryea

Hint! Sycamore and Fairbury both have small airports.



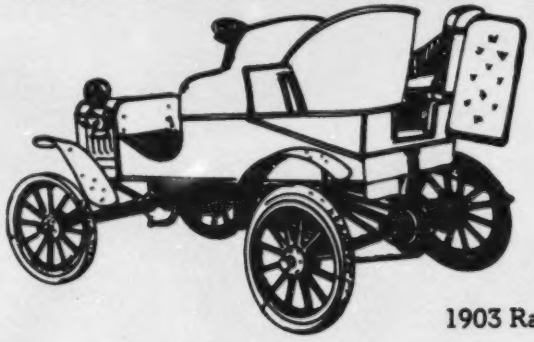
1927 Pierce Arrow Runabout

WHICH DIRECTION?

a. Moline	d. Danville	g. Lawrenceville
b. Rockford	e. Quincy	h. Benton
c. Evanston	f. Springfield	i. East St. Louis

I. Which of the above cities is -

1. Due North of Bloomington _____
2. Due West of Ottawa _____
3. Due East of Savanna _____
4. Due South of Chicago _____
5. Southeast of Alton _____
6. Northwest of Effingham _____
7. Southeast of Peoria _____
8. Southwest of Galesburg _____
9. Northeast of Charleston _____
10. Southwest of Champaign _____



1903 Rambler

II. Which large city is -

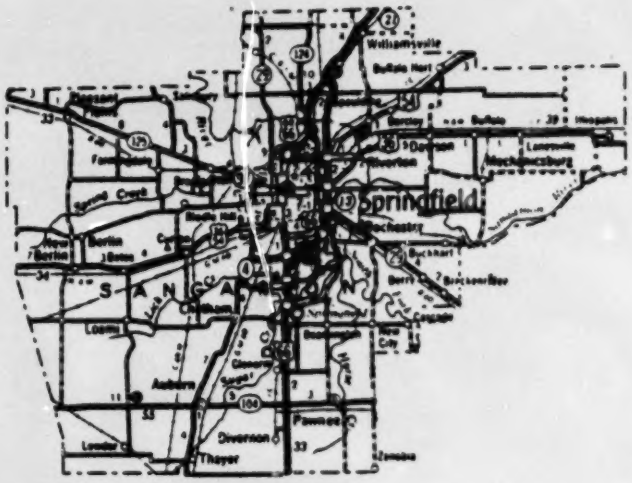
1. South of Ottawa *and* West of Kankakee _____
2. North of Springfield *and* Northwest of Bradley _____
3. North of Springfield *and* Northwest of Mattoon _____
4. West of Decatur *and* Northwest of Alton _____
5. East of Quincy *and* Southeast of Pekin _____
6. Northeast of Canton *and* Northwest of Clinton _____

Map Scale
5 cm = 40 km
2.5 cm = 20 km
1 cm = 8 km

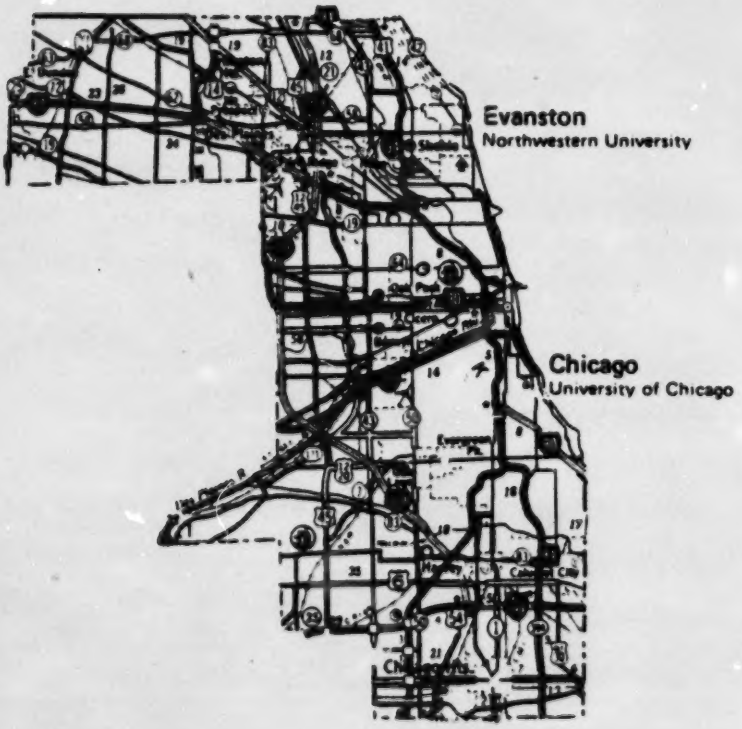
WHAT IS THE AREA?

Directions: Use the centimeter (cm) scale in determining the approximate area in square kilometers (km^2) of the following counties:

1. Kendall _____
2. Iroquois _____
3. Wayne _____
4. Saline _____
5. Warren _____
6. Macoupin _____
7. Stark _____
8. Ford _____
9. Lake _____
10. Jackson _____



1. Measure in centimeters.
2. Change to kilometers using map scale.
3. Multiply L x W to get area in km^2.

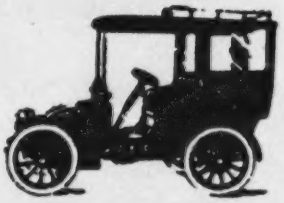


1. Stephenson _____
2. Marion _____
3. Grundy _____
4. Knox _____
5. LaSalle _____
6. Will _____
7. Piatt _____
8. Adams _____
9. DeWitt _____
10. Monroe _____

AS THE CROW FLIES

Name the largest city within a 40 kilometer radius of

1. Lincoln _____
2. Pontiac _____
3. Pana _____
4. Dixon _____
5. Pinckneyville _____

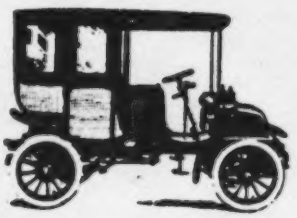


Find the approximate airline distance, and compare this with the kilometer distance listed in the distance chart.

	Distance Chart	Airline
1. Paris and Bloomington	_____	_____
2. Decatur and Rock Island	_____	_____
3. Cairo and Springfield	_____	_____
4. Freeport and Aurora	_____	_____
5. Elgin and East St. Louis	_____	_____

Find the approximate flight time (in hours and minutes) of an airplane flying at kilometers per hour from

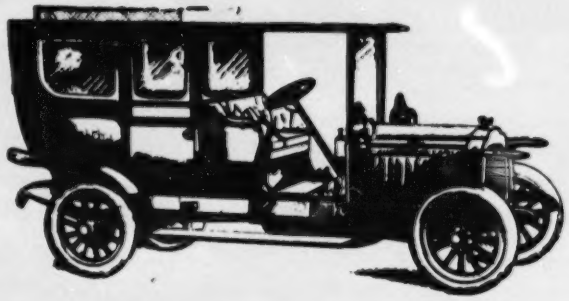
1. Rockford to Peoria _____
2. Meigs Field (Chicago) to St. Louis _____
3. Rantoul to O'Hare Field _____



TRIP PLANNING PROJECTS

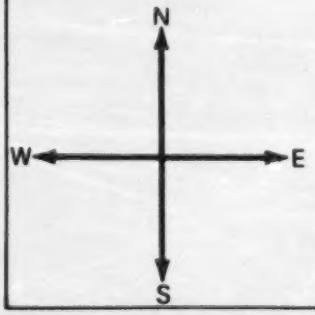
MY TRIP ROUTE

Prepare a brief written description of the route you plan to take on your one-day trip. Give details, including route numbers, cities, bridges, rivers, landmarks, etc. Complete sentences are NOT NECESSARY. Write the description exactly as you would tell it to a friend.



MY TRIP MAP

Prepare a free-hand map of your trip. Show your starting point, route numbers, cities, bridges, rivers, parks, destinations, etc. TRY TO KEEP ALL DISTANCES IN PROPORTION! You may want to use the suggested scale.

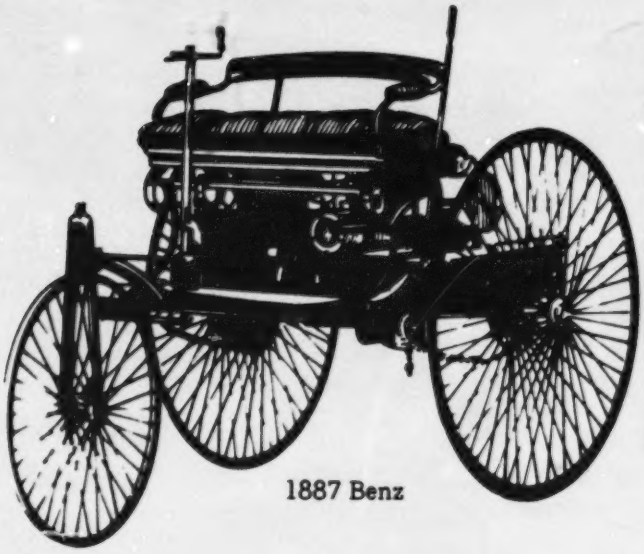


Scale:

5 cm = 40 kilometers
2.5 cm = 20 kilometers
1 cm = 8 kilometers

MY TRIP DISTANCE CHART

Using your road map, compute distance on each type of road. Use your map legend to determine road types.



1887 Benz

Type of Road	Kilometers Driven
Four-lane Highway	
Two-lane Highway	
Asphalt Road	
City Streets	
Total	

Compute your gasoline costs, using the flow chart below. Transfer gasoline cost to your trip budget sheet.

Total kilometers ÷ 15 km per liter = _____ x $0.15 per liter = $_____

Show your work below:

MY TRIP BUDGET

Prepare a budget for your trip. Plan the trip for your entire family. Gasoline costs may be computed on the TRIP DISTANCE CHART:

Expense	Amount
Gasoline at $0.15 per liter	$_____
Meals:	
Breakfast: _____meals at $0.75	$_____
Lunch: _____meals at $1.00	_____
Dinner: _____meals at $1.50	_____
Tolls and Admissions (itemize below):	
_____	$_____
_____	_____
_____	_____
Other Expenses (itemize below):	
_____	$_____
_____	_____
_____	_____
_____	_____
TOTAL	$_____

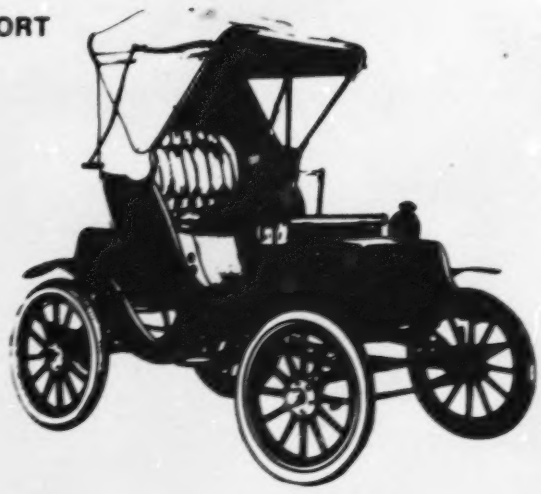
MY TRIP TIME LOG

Prepare a time log (or record) of your trip starting at 7:00 a.m. when you leave from your home. Most travelers average 75–80 kilometers per hour on short pleasure trips. They usually plan a 30-minute stop for each meal.

Time	Remarks

MY TRIP REPORT

Write a short report telling about one of the sites that you plan to visit. Tell about the site's historic, educational, scenic, and recreational values. Prepare a rough draft of your report before copying it on this sheet.



1902 Studebaker Electric

PREPARING MY BOOKLET

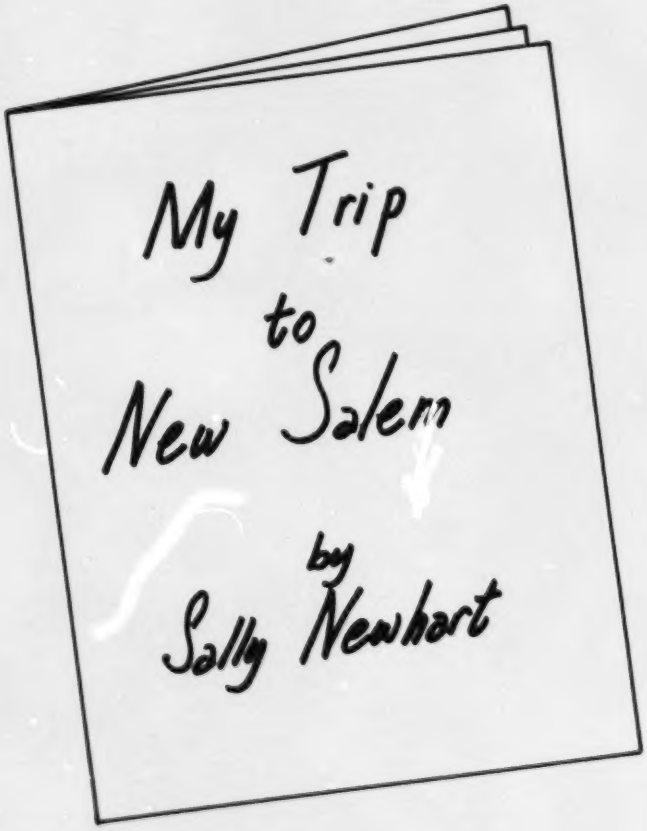
Now that you have finished work on planning a one-day trip for your family, you may want to place all of the worksheets together and prepare a bound booklet. The worksheets should be placed together in the following order:

1. MY TRIP ROUTE
2. MY TRIP MAP
3. MY TRIP DISTANCE REPORT
4. MY TRIP BUDGET
5. MY TRIP TIME LOG
6. MY TRIP REPORT

When you have your worksheets in the correct order, staple them three times about one centimeter from the left-hand edge of the paper.

You may want to prepare a cover for your booklet using a 30x 46 cm sheet of construction paper. Fold the construction paper to form a front and back for your booklet. This will make the cover 23 cm by 30 cm. Staple the cover to the worksheets.

Your cover may be hand-lettered with colored pens or pencils in a form similar to the one shown below:



ANSWER SHEET

Road Map Math

(Based on 1977-78 Highway Map)

ANSWER SHEET
ROAD MAP MATH

Page No.

1. 1) 627, 2) 349, 3) Rend, Carlyle, Shelbyville, 4) 102, 5) Iowa, Wisconsin, Missouri, Kentucky, Indiana, 6) roughly 960 km.

2. 1) 8 , 2) 5 , 3) Springfield, 4) Mississippi River, 5) answers will vary, 6) answers will vary, 7) 22, 8) answers will vary, 9) circle, 10) proposed highways.

3. 1) 73, 2) 4, 3) 5, 4) 62, 5) 87, 6) 73; 1) Red Hills, 2) Starved Rock, 3) Siloam Springs, 4) Johnson Sauk Trail, 5) Kickapoo, 6) Weldon Springs, 7) Lowden, 8) Lincoln's New Salem, 9) Lake Le-Aqua-Na, 10) Illini.

4. 1) 5840, 2) 4244, 3) 70 169, 4) 4112, 5) 9971, 6) 149 4 4 , 7) 1742, 8) 20 553, 9) 10 736, 10) 781, 11) 80 113, 12) 15 144, 13) 2632, 14) 6277

5. 1) 411, 2) 597 , 3) 253, 4) 430, 5) 232, 6) 235, 7) 477 , 8) 510, 9) 296, 10) 262, 11) 234, 12) 184, 13) 282, 14) 328, 15) 322, 16) 237, 17) 386, 18) 757, 19) 523, 20) 179.

6. 1) 47 and 24, 2) 48 and 10, 3) 267 and 108, 4) 92 and 26, 5) 15 and 130, 6) 24 and 117, 7) 78 and 9, 8) 36 and 45, 9) 31 and 120, 10) 23 and 18, 11) 10 and 29, 12) 7 and 171, 13) 23 and 64, 14) 50 and 37, 15) 67 and 116, 16) 45 and 63 (see Chicago map), 17) 30 and 88, 18) 66 and 136, 19) 30 and 57.

7. 1) 1 055.3, 2) 1 618.8, 3) 844.3, 4) 1 387.8, 5) 2 095.1, 6) 471.8, 7) 1 773.4, 8) 1 940.7, 9) 637.1, 10) 786.2

8. 1) F, 2) D, 3) A, 4) F, 5) D, 6) C, 7) C, 8) B, 9) D, 10) B

9. 1) J, 2) H, 3) U, 4) W, 5) L, 6) N, 7) W, 8) CH, 9) H, 10) B, 11) SV, 12) M, 13) G, 14) C, 15) W, 16) R, 17) M, 18) M, 19) C, 20) T.

10. 1) Beardstown, 2) Downers Grove, 3) Carmi, 4) Harvey, 5) Morton, 6) Aledo, 7) Kankakee, 8) Belvidere, 9) Pontiac, 10) Arlington H., 11) Park Ridge, 12) Sparta, 13) Washington, 14) Harvard, 15) East Moline, 16) Chicago, 17) Milford, 18) Shelbyville, 19) Morris, 20) Macomb

11. 1) B, 2) J, 3) E, 4) C, 5) A, 6) C, 7) C, 8) E, 9) A, 10) L, 11) L 12) E, 13) B, 14) B, 15) F, 16) H, 17) H, 18) E, 19) B, 20) H, 21) A, 22) E, 23) L, 24) A, 25) L, 26) D, 27) L, 28) L. 29) B, 30) L, 31) D, 32) L, 33) I, 34) L, 35) G, 36) G, 37) L, 38) L. 39) F, 40) E

Answer Sheet - Road Map Math

Page No.

12. 1) A, 2) I, 3) L, 4) D, 5) G, 6) H, 7) K, 8) E, 9) L, 10) B, 11) L, 12) L, 13) K, 14) I, 15) H, 16) A, 17) E, 18) H, 19) A, 20) D, 21) J, 22) D, 23) E, 24) L, 25) J, 26) H, 27) B, 28) L, 29) E or F, 30) I, 31) F, 32) F, 33) L, 34) K, 35) J, 36) J, 37) L, 38) F, 39) E, 40) L

13. 1) H, 2) G, 3) H, 4) D, 5) H, 6) I, 7) J, 8) K, 9) G, 10) J, 11) I, 12) K, 13) K

14. 1) 241, 2) 56 994, 3) 23 490, 4) 1435, 5) 22 461, 6) 24 029, 7) 25 411, 8) 14 289, 9) 1280, 10) 12 039, 11) 86 602, 12) 226, 13) 1261, 14) 20 558, 15) 5777, 16) 2513, 17) 255

15. 1) 17, 2) 785, 3) 4048, 4) 466, 5) 867, 6) 1720, 7) 8158, 8) 3942, 9) 414, 10) 433, 11) 4415, 12) 1768, 13) 5291, 14) 6801, 15) 1175

16. 1) 6, 2) 4, 3) 4, 4) 8, 5) 14, 6) 5, 7) 7, 8) 5, 9) 7, 10) 11, 11) 2, 12) 5, 13) 14, 14) 2, 15) 7, 16) 11, 17) 2, 18) 156, 19) 83, 20) 4

17. 1) 620, 2) 2540, 3) 1860, 4) 1420, 5) 890, 6) 3630, 7) 10 740, 8) 2100, 9) 5200, 10) 1190, 11) 2210, 12) 1940, 13) 1680, 14) 330, 15) 12 690, 16) 2550, 17) 1330, 18) 490, 19) 950, 20) 1740, 21) 1790, 22) 3630, 23) 4830, 24) 9370, 25) 1780, 26) 2090, 27) 720, 28) 1650, 29) 650, 30) 3040

18. 1) 600, 2) 1300, 3) 4700, 4) 500, 5) 1800, 6) 2300, 7) 1200, 8) 8300, 9) 1900, 10) 6600, 11) 1800, 12) 4500, 13) 5000, 14) 1300, 15) 3000, 16) 800, 17) 22 700, 18) 9400, 19) 400, 20) 600, 21) 1800, 22) 300, 23) 2700, 24) 3700, 25) 1900, 26) 2900, 27) 3900, 28) 6800, 29) 1700, 30) 92 400, 31) 6900, 32) 1300, 33) 2000, 34) 2900

19. 1) 2000, 2) 26 000, 3) 10 000, 4) 13000, 5) 2000, 6) 2000, 7) 3000, 8) 21 000, 9) 3000, 10) 11 000, 11) 39 000, 12) 5000, 13) 20 000, 14) 9000, 15) 3000, 16) 21 000, 17) 5000, 18) 5000, 19) 22 000, 20) 9000, 21) 16 000, 22) 14 000, 23) 1000, 24) 11 000

20. 1) F, 2) D, 3) E, 4) C, 5) A, 6) B; 1) C, 2) D, 3) E, 4) F, 5) B, 6) A; 1) I, 2) C, 3) H, 4) D, 5) A, 6) J, 7) B, 8) F, 9) E, 10) G; 1) D, 2) J, 3) C, 4) H, 5) F, 6) I, 7) G, 8) A, 9) B, 10) E

21. Red: Cahokia, Marion, Pontiac, Carlinville, Knoxville, Norris City.
Green: Springfield, Decatur, Aurora, Joliet, East St. Louis, Elgin.
Blue: Rantoul, Wood River, Loves Park, Murphysboro, Geneseo, Greenville, Casey, Petersburg, Carrier Mills.
Gold: Berwyn, North Chicago, Franklin Park, Brookfield, LaGrange Park, Palos Hills.

22. 1) 884, 2) 1613, 3) 20 130, 4) 8376, 5) 2480

23. No. 1: 134, 123, 133. No. 2: 112, 115, 123 No. 3: 157, 128, 155.

Answer Sheet - Road Map Math

Page No.

24. 1) A, 2) A

25. 1) 381, 2) 90, 3) 154, 4) 282, 5) 272, 6) 258, 7) 309, 8) 325; 1) 314, 3 Hrs.-56 Mins., 2) 160, 2 Hrs., 3) 107, 1 Hr.-20 mins., 4) 410, 5 Hrs.-8 mins., 5) 251, 3 Hrs.-8 mins.

26. 1) 21, 2) 32, 3) 61, 4) 138, 5) 46, 6) 56, 7) 46, 8) 90, 9) 67, 10) 43, 11) 107, 12) 61, 13) 84, 14) 105, 15) 191.

27. 1) Olney, 2) DuQuoin, 3) Galesburg, 4) Quincy, 5) Joliet, 6) Mt. Vernon, 7) Dixon, 8) Harrisburg, 9) Freeport, 10) Kankakee, 11) Decatur, 12) Marion.

28. 1) Springfield; 2A) 189, 2B) 114, 2C) 69, 2D) 111, 3) answers will vary, 4) (54, 36, 29, 55, 66, 4, 97), 5) No.

29. 1) S, 2) WC, 3) EC, 4) NE, 5) NW, 6) S, 7) S, 8) C, 9) EC, 10) NW, 11) NE, 12) C.

30. 1) $78.48, 2) $103.32, 3) $120.33, 4) $83.07, 5) $61.74, 6) $160.38, 7) $49.23, 8) $101.25, 9) $63.99, 10) $131.31

31. 1) $153.48, 2) $218.32, 3) $220.33, 4) $333.07, 5) $261.74, 6) $220.38, 7) $174.23, 8) $251.25, 9) $238.99, 10) $381.31

32. 1) 22, 2) 32, 3) 30, 4) 136, 5) 32, 6) 38, 7) 29, 8) 14, 9) 67, 10) 69.

33. 1) I90, Eisenhower Expressway, 2) I294, Tri-State Tollway, 3) I57, 4) I90, Eisenhower Expressway, 5) I294, Tri-State Tollway, 6) I90, East-West Tollway, 7) I80, 94 Kingery Expressway, 8) I94, Calumet Expressway, 9) I94, Edens Expressway, 10) I55, Joliet Road.

34. 1) Both on Illinois River, 2) Both near a lake, 3) Both on Mississippi River, 4) Both on Highway 51, 5) Both on Lake Michigan, 6) Both have State Universities, 7) Named after early explorers, 8) Both are county seats, 9) Both on Lincoln Heritage Trail, 10) Both early State Capitols.

35. 1) B, 2) A, 3) C, 4) D or G, 5) H, 6) F, 7) G, 8) E, 9) D, 10) I;
1) Streator, 2) Freeport, 3) Peoria, 4) Quincy, 5) Decatur, 6) Peoria.

36. 1) 800, 2) 2805, 3) 1787, 4) 960, 5) 1355, 6) 2180, 7) 728, 8) 1220, 9) 1143 10) 1506; 1) 1420, 2) 1450, 3) 1080, 4) 1820, 5) 2883, 6) 2113, 7) 1093, 8) 2165 9) 998, 10) 950.

37. 1) Clinton, 2) Streator, 3) Taylorville, 4) Sterling, 5) Murphysboro;
1) 181, 152; 2) 282, 235; 3) 349, 317; 4) 158, 128; 5) 456, 419; 1) 19 Mins., 2) 45 Mins., 3) 20 Mins.

NOTE: pp. 38-41 contain a project; no answers needed.